UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/422,018	10/21/1999	JAMES A. SIEVERT	RA-5236(USYS	4961

7590 10/27/2003	EXAMINER
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ART UNIT	PAPER NUMBER
2124	

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DATE MAILED: 10/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application N .	Applicant(s)
Office Action Summary	09/422,018	SIEVERT, JAMES A.
	Examin r	**Art Unit**
	William H. Wood	2124

-- The MAILING DATE of this communication appears on the cover sheet with the correspond nc address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _03 December 1999_ .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disp sition of Claims

4)☒ Claim(s) _1-16_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-16_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _21 October 1999_ is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
        application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: .

DETAILED ACTION

Claims 1-16 are pending and have been examined.

Drawings

1.   The drawings, submitted 21 October 1999, are objected to by Draft Person's

review (see attached PTO-948). The objection to the drawings will not be held in

abeyance.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Gibbons et al. (USPN 6,412,019) in view of **Shepherd** et al, "The Visual Programmer"

(October 1997).

In regard to claim 1, **Gibbons** disclosed the limitations:

- *A computer-implemented method for implementing a hierarchy of interfaces*

   (Figures 3 and 4; column 3, lines 24-30; column 6, lines 25-35), comprising:

   - *defining a hierarchy of interfaces, wherein an interface at a lowest level of*

      the hierarchy inherits from an interface at the highest level of the hierarchy

      (Figure 4);

Gibbons did not explicitly state *component object model interfaces; template classes associated with the hierarchy; and instantiating the second template class with an interface as a template parameter.* **Shepherd** demonstrated that it was known at the time of invention to use COM, component object model, for interfaces (page 1 of 11, first paragraph), template classes associated with the hierarchy (page 9 of 11, second code segment; template class shown by instantiating class with templates and using interface calls, "IdispatchImpl") and inheriting from other template classes (page 9 of 11, second code segment; inheritance operation using classes taking template parameters) and an interface template parameter (page 9 of 11, second code segment). It would have been obvious to one of ordinary skill in the art at the time of invention to implement **Gibbons'** hierarchy of interfaces with a COM base and a templating ability as found in **Shepherd's** teaching, thus developing an inheritance interface system, which is parameterized with templates. This implementation would have been obvious because one of ordinary skill in the art would be motivated to provide a system utilizing COM as it is well known (and especially useful in the Microsoft world) and utilizing templates as they produce code which is very extensible while at the same time reducing bloated code.

In regard to claim 2, **Gibbons** and **Shepherd** disclosed the limitation *wherein the second template class inherits directly from the first template class* (inherent to the concepts of inheritance disclosed above in the references).

In regard to claim 3, **Gibbons** and **Shepherd** disclosed the limitation *wherein the second template class inherits indirectly from the first template class* (inherent to the concepts of inheritance disclosed above in the references).

In regard to claim 4, **Gibbons** and **Shepherd** disclosed the limitation *further comprising defining a plurality of intermediate classes in a inheritance arrangement, one of the intermediate classes inheriting from the first template class, and the second template class inheriting from another one of the intermediate classes* (inherent to the concepts of inheritance disclosed above in the references). **Gibbons** and **Shepherd** did not teach single inheritance explicitly. Official Notice is taken that it was known at the time of invention to use single inheritance. It would have been obvious to one of ordinary skill in the art at the time of invention to implement **Gibbons** and **Shepherd** with single inheritance as is well known in the art. This implementation would have been obvious because one of ordinary skill in the art would be motivated to make use of a simpler type of inheritance to avoid programming difficulties resulting in ambiguities of inheritance.

In regard to claim 5, **Gibbons** and **Shepherd** disclosed the limitation *wherein one or more of the intermediate classes are template classes* (inherent to the concepts of inheritance disclosed above in the references; template classes are shown, and inheritance often involves a chain of inheritances).

In regard to claim 6, **Gibbons** and **Shepherd** disclosed the limitation *further comprising defining an intermediate class, the intermediate class inheriting from the first template class, and the second template class inheriting from the intermediate class* (inherent to the concepts of inheritance disclosed above in the references; template classes are shown, and inheritance often involves a chain of inheritances).

In regard to claim 7, **Gibbons** and **Shepherd** disclosed the limitation *wherein the intermediate class is a template class* (inherent to the concepts of inheritance disclosed above in the references; template classes are shown, and inheritance often involves a chain of inheritances).

In regard to claim 8, **Gibbons** and **Shepherd** disclosed the limitation *wherein the interface provided as the template parameter is an interface at the lowest level of the hierarchy* (inherent to the concepts of inheritance disclosed above in the references; template classes are shown, and inheritance often involves a chain of inheritances).

In regard to claim 9, **Gibbons** and **Shepherd** disclosed the limitations, further comprising:

- *extending the hierarchy of component object model interfaces to include a new interface defined at the lowest level of the hierarchy, wherein the new interface inherits from the interface at the highest level of the hierarchy;*

- ◆ *defining a third template class that inherits from the first template class and is associated with the new interface defined at the lowest level of the hierarchy; and*

- ◆ *instantiating the third template class with the new interface as a template parameter.*

These limitations are met essentially the same as above for the second template class noted in claim 1's rejection.

In regard to claim 9, **Gibbons** and **Shepherd** disclosed the limitation, *further comprising defining ActiveX Template Library interface maps in the first template class and in the second template class, respectively* (**Gibbons**: page 1 of 11, first paragraph, ATL which includes ActiveX Template Library interface maps).

In regard to claims 11-15, the limitations correspond to those found in claims 1-10 and are rejected in the same manner.

In regard to claim 16, the limitations correspond to claims 1 and 2 and as such are rejected now in the same manner as claims 1 and 2 above.

Conclusion

4.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

ImplementQI.H disclosed interface template parameters.

Correspondenc Information

     Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Wood whose telephone number is (703)305-3305. The examiner can normally be reached 7:30am - 5:00pm Monday thru Thursday and 7:30am - 4:00pm every other Friday.

     If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (703)305-9662. The fax phone numbers for the organization where this application or proceeding is assigned are (703)746-7239 for regular communications and (703)746-7238 for After Final communications.

     Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

William H. Wood
October 8, 2003

KAKALI CHAKI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100